UNITED STATES PATENT AND TRADEMARK OFFICE

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10/561,445	11/21/2006	Masahiro Inoue	283692US90PCT	8214

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EXAMINER
IQBAL, KHAWAR

ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
11/12/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _18 June 2009_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-9_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-9_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☒ None of:

   1.☒ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Funato et

al (20060025161).

Regarding claim 1 Funato teaches a controller apparatus configured to

implement paging control in which, when the controller apparatus receives a packet

addressed to a mobile terminal (mobile host MH), the controller apparatus transmits a

paging notification packet to a paging area of the mobile terminal (MH), so as to obtain

location information on the mobile terminal (MH) and to determine a forwarding

destination of the packet, the controller apparatus comprising (fig. 5, 9):

a paging area forming unit (920, fig. 9) having a plurality of algorithm (The

communication network 100 is configured to provide paging for mobile hosts MHs in the

network and for example paging areas reconfigure themselves according to changes in

movement traffic of MHs, dynamic configuration of paging areas and automatically

Reconfigured) for forming the paging area, para. 0075-0076, fig. 9-12);

wherein the paging area forming unit (920, fig. 9) is configured to form the paging area

of the mobile terminal (MH 902) by an algorithm of the plurality of algorithm which is

associated with an application started by the mobile station and is specified by the

mobile terminal (para. # 0050-0051, 0064-0065, 0086, 0145).

Regarding claim 2 Funato teaches wherein the paging area forming unit is

configured to form the paging area of the mobile terminal, in accordance with a load

condition or traffic distribution of the controller apparatus (para. # 0083-0085).

Regarding claim 3 Funato teaches a mobile terminal configured to implement

paging control in which, when a controller apparatus receives a packet addressed to the

mobile terminal, the controller apparatus transmits a paging notification packet to a

paging area of the mobile terminal, so as to obtain location information on the mobile

terminal and to determine a forwarding destination of the packet, the mobile terminal

comprising (fig. 1-9 and 20, abstract):

an algorithm specifying unit configured to specify, to the controller apparatus

(920, fig. 9), an algorithm for forming the paging area of the mobile terminal (mobile host

MH), the algorithm being associated with an application started by the mobile terminal

(para. # 0064, 0086, 0075-0077, 0111-0114, fig. 9-12); and

a paging control unit (908, fig. 20) configured to perform the paging control based

on information on the paging area formed by the controller apparatus based on the

algorithm (when the received paging area identification information does not match the

stored paging area identification information, transmitting the Paging ID, PCA NAI and

the location information to a new access point. Dynamic paging area configuration

algorithm, PCA 920 operates to receive movement reports from mobility reporter agents of mobile hosts in communication with last hop router 904, 906. A PCA is notified by a dormant monitoring agent (DMA) of a packet arrival to a mobile host and sends paging clustering messages to the local paging agent (LPA) clusters. Once the PCA 920 receives positive or negative results from LPA clusters, the PCA notifies the DMA para. # 0075-0076, 0086-0090, 0111-0114, fig. 9-12).

Regarding claim 4 Funato teaches a processing language specifying unit configured to specify, to the controller apparatus, a processing language in which an algorithm for forming the paging area is written; wherein the algorithm specifying unit is configured to specify the algorithm written in the processing language when a result of determination that the processing language can be handled is received from the controller apparatus (para. # 0051, 0073-0074, 0082, see above).

Regarding claim 5 Funato teaches a controller apparatus configured to implement paging control in which, when the controller apparatus receives a packet addressed to a mobile terminal, the controller apparatus transmits a paging notification packet to a paging area of the mobile terminal, so as to obtain location information on the mobile terminal and to determine a forwarding destination of the packet, the controller apparatus comprising:

an algorithm specifying unit configured to specify, to the mobile terminal, identification information of an algorithm stored in the mobile terminal for the mobile terminal to user in forming the paging area of the mobile terminal (para. # 0064, 0086, 0145, fig. 9-12 and 20); and

a paging control unit configured to perform the paging control based on the

paging area formed by the mobile terminal based on the algorithm (dynamic paging

area configuration algorithm, PCA 920 operates to receive movement reports from

mobility reporter agents of mobile hosts in communication with last hop router 904, 906.

A PCA is notified by a dormant monitoring agent (DMA) of a packet arrival to a mobile

host and sends paging clustering messages to the local paging agent (LPA) clusters.

Once the PCA 920 receives positive or negative results from LPA clusters, the PCA

notifies the DMA para. # 0064-0070, 0086-0090, 0111-0114, fig. 9-12).

Regarding claim 6 Funato teaches a processing language specifying unit

configured to specify, to the mobile terminal, a processing language in which an

algorithm for forming the paging area is written; wherein the algorithm specifying unit is

configured to specify the algorithm written in the processing language when a result of

determination that the processing language can be handled is received from the mobile

terminal (para. # 0064, 0083-0086, 0145, fig. 9 and 20).

Regarding claim 7 Funato teaches a mobile terminal configured to implement

paging control in which, when a controller apparatus receives a packet addressed to a

mobile terminal, the controller apparatus transmits a paging notification packet to a

paging area of the mobile terminal, so as to obtain location information on the mobile

terminal and to determine a forwarding destination of the packet, the mobile terminal

comprising:

a paging area forming unit associating and storing an identification information of an application and an identification information of an algorithm for forming the paging area (para. # 0064, 0086, 0145, fig. 9 and 20);

wherein the paging area forming unit is configured to form the paging area of the mobile terminal by an algorithm specified by the controller apparatus which corresponds to the identification information of the algorithm associated with the identification information of the application started by the mobile terminal (dynamic paging area configuration algorithm, PCA 920 operates to receive movement reports from mobility reporter agents of mobile hosts in communication with last hop router 904, 906. A PCA is notified by a dormant monitoring agent (DMA) of a packet arrival to a mobile host and sends paging clustering messages to the local paging agent (LPA) clusters. Once the PCA 920 receives positive or negative results from LPA clusters, the PCA notifies the DMA para. # 0064-0070, 0086-0090, 0111-0114, fig. 9-12 and 20).

Regarding claim 8 Funato teaches wherein the paging area forming unit is configured to form the paging area of the mobile terminal, in accordance with a communicating use or movement characteristics of the mobile terminal (para. # 0064, 0083-0086, 0145).

Regarding claim 9 Funato teaches a mobile terminal configured to implement paging control in which, when a controller apparatus receives a packet addressed to a mobile terminal, the controller apparatus transmits a paging notification packet to a paging area of the mobile terminal, so as to obtain location information on the mobile

terminal and to determine a forwarding destination of the packet, the mobile terminal

comprising:

a paging area forming unit associating and storing an identification information of an

application and an identification information of an algorithm for forming the paging

area; and a transmitting unit configured to transmit, to the controller apparatus,

information on the paging area formed by the paging area forming unit (para. # 0064-

0069, 0083-0086, 0145, fig. 9 and 20);

wherein the paging area forming unit forms a paging area of the mobile terminal

based on an algorithm corresponding to the identification information of the algorithm

associated with the identification information of the application started by the mobile

terminal, and wherein, when information on the paging area different from the

information on the paging area formed by the paging area forming unit is received from

the controller apparatus, the transmitting unit is configured to transmit, to a different

controller apparatus, the information on the paging area formed by the paging area

forming unit (dynamic paging area configuration algorithm, PCA 920 operates to receive

movement reports from mobility reporter agents of mobile hosts in communication with

last hop router 904, 906. A PCA is notified by a dormant monitoring agent (DMA) of a

packet arrival to a mobile host and sends paging clustering messages to the local

paging agent (LPA) clusters. Once the PCA 920 receives positive or negative results

from LPA clusters, the PCA notifies the DMA para. # 0064-0070, 0086-0090, 0111-

0114), fig. 9-12 and 20).

Response to Argument

3.   Applicant's arguments filed 06-18-09 have been fully considered but they are not

persuasive. The examiner has thoroughly reviewed applicant's arguments but firmly

believes that the cited references reasonably and properly meet the claimed limitations.

In regard to applicant's arguments against Funato et al was that "However, Applicants

submit that Funato does not disclose or suggest an algorithm which is associated with a

particular application started by the mobile host. On the contrary, the "algorithm"

interpreted by the Office Action is based on movement data of a mobile host and is not

based on an application which is started up by the mobile host. Therefore, Applicants

submit that Funato fails to disclose or suggest "wherein the paging area forming unit is

configured to form the paging area of the mobile terminal by a algorithm of the plurality

of algorithms which is associated with an application started by the mobile station and is

specified by the mobile terminal," as defined by amended Claim 1". Examiner

respectfully disagrees with this argument. Funato et al teaches that upon detecting a

location change of the mobile host, storing the current paging area identification

information of the first paging area as a previous location of the mobile host, storing the

subsequent paging area identification information of the second paging area as the

current location of the mobile host, and transmitting a movement report to the second

access point of the telecommunication system from the mobile host, the movement

report including the current location, the previous location and paging area identification.

For example, when the received paging area identification information does not match

the stored paging area identification information, mobile host is transmitting the Paging

ID, PCA NAI and the location information of the mobile host to a new access point

(Note: Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Examiner interpreted 908 {2004 and 2006}, fig. 20 claimed

applications started by the mobile host to an access point). Dynamic paging area

configuration algorithms (dynamic configuration of paging areas or/and automatically

Reconfigured) for forming the paging area, PCA 920 operates to receive movement

reports from mobility reporter agents of mobile hosts in communication with last hop

router 904, 906. A PCA is notified by a dormant monitoring agent (DMA) of a packet

arrival to a mobile host and sends paging clustering messages to the local paging agent

(LPA) clusters. Once the PCA 920 receives positive or negative results from LPA

clusters, the PCA notifies the DMA (para. # 0064-0070, 0086-0090, 0111-0114, fig. 9-12

and 20).

Conclusion

4.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to KHAWAR IQBAL whose telephone number is (571)272-

7909. The examiner can normally be reached on 9 am to 6.30 pm Monday to

Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, GEORGE ENG can be reached on 571-272-7495. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. I./
Examiner, Art Unit 2617

/Charles N. Appiah/
Supervisory Patent Examiner, Art Unit 2617